INFORMATION FOR THE WARFIGHTER

The ViewPoint

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Inside ...

See the new AR 25-1 at http://www.army.mil/disc4/ar25-1/default.htm

SIDPERS-3 Hits The Jackpot With Reuse Successes

by Mr. Jeff Rhoadhouse in conjunction with the Army Reuse Center

In today's world of decreasing revenues and downsizing, it is critical that spending be kept to a minimum. However, development efforts still dictate that schedules be met, but with less personnel and an ever-decreasing budget. Times like this force organizations to find a cheaper and faster means of satisfying ADP requirements. That's where the ARC [Army Reuse Center] comes into play. The ARC exists, in part, to provide a variety of software reuse services to Army PEOs, PMs, and software development organizations within the Department of Defense (DoD). As such, the ARC is responsible for assisting Army and DoD customers in locating and extracting reusable components.

One such customer which the ARC has recently assisted is the Standard Installation/Division Personnel System-3 (SIDPERS-3). Due to their migration from XDB™ to the Informix™ database, the XDB™ version of Ad Hoc Query (AHQ) that SIDPERS-3 currently uses had to be modified. Knowing that they could use the improved query generation functionality which the AHQ for Oracle™ provides, SIDPERS-3 acquired this reusable component from the ARC. (Note: This component resides in the ARC Library and in the Global Command and Control System (GCCS) Repository under the name ADHOC_QUERY_ORACLE, Reusable Software Component (RSC) ID: 10d003tv).

Both the XDB™ and Oracle™ versions are Ada packages which provide a full featured, state-of-the-art tool for constructing queries and reports without prior knowledge of the database structure, or of formal query languages. The core of these packages is the data dictionary. The data dictionary provides a view of the database that conforms with the user's perspective. The data dictionary is used to translate the user's perspective [in]to tables and columns that comprise the physical database. The differences between these versions is that the Oracle™ version provides a graphical user interface, whereas the XDB™ version is character based.

The AHQ system was originally written for SIDPERS-3 by Mr. Jim Wolfe, Systems Research Applications [SRA] Senior Computer Scientist, to support the XDB™ database engine. Although the functionality of AHQ is similar to that found in packages like Microsoft Access™, in Mr. Wolfe's opinion, "The SIDPERS-3 Ad Hoc Query is technically more sophisticated than anything on the market."[1] (Note: the XDB™ version of AHQ resides in the ARC Library under the name ADHOC_QUERY_XDB, RSC ID: 10d001si).

Mr. Jeff Rhoadhouse, Senior Programmer/Analyst, American Technical Resources, Inc., working for SIDPERS-3, reused 1250 lines of Ada code and some of the methods for query generation from the Oracle™ version of AHQ in the reengineering of AHQ

Continued on page 15

From The Director:

We have a valuable tool in the Army Reuse Center—the cover article highlights the assistance they provided SIDPERS-3 when migrating from XDB to Informix—a truly "win-win" situation.

Business Process Reengineering is our new way of life, according to the Information Technology Management Reform Act of 1996. We need to look at the ways our work is performed and reengineer or restructure as appropriate before systems selection or modernization takes place. The new procedures and training and information sources are outlined for you.

AR 25-1, is on line! See it at **http://www.army.mil/disc4/ar25-1/default.htm**

Our Director of Information Management returned from a two-year assignment with the National Academy of Public Administration. The experience gained there, together with her service to the Army, provide an excellent view of Information Management in the Federal government. You will find her article an excellent strategic look at our business.

STC '97 promises another year of important information from the Defense establishment leaders. As the premier software technology conference in DoD, this year's theme of "Information Dominance Through Software Technology" provides the framework for a conference you should not miss.

The Project Management for the Small Computer Program awarded two new contracts—the Personal Computer 2 and the Portable Computer 2. Their article includes a list of other available contracts which greatly facilitate acquisition.

Lastly, our Editor is retiring. We will all miss her. I have sincerely appreciated her dedicated personal efforts. Thank you, Pat.

OTTO J. GUENTHER
Lieutenant General, GS
Director

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Information contained in this bulletin covers policies, procedures, and other items of interest concerning the information management area. Statements and opinions expressed are not necessarily those of the Department of the Army. This bulletin is published quarterly under the provisions of AR 25-30 as a functional bulletin. We distribute The ViewPoint in paper form, place it on the Bulletin Board and publish on the World Wide Web at **http://www.army.mil/disc4/newslet/newslet.html**. Local reproduction of this bulletin is authorized and encouraged, either in paper or electronic form.

We solicit your comments, questions, recommendations, and articles for publication on matters that will assist and inform readers Army wide. Please direct your input to THE EDITOR, THE VIEWPOINT, ATTN SAIS-IIAC, DIR INFO SYS CMD CON COMM COMP, 107 ARMY PENTAGON, WASHINGTON DC 20310-0107, telephone DSN 235-9483, commercial 703-275-9483. You may also contact the editor electronically at FAX 703-275-6016 or DSN 235-6016 or E-mail to **viewpoint@hqda.army.mil**.

News Flash

New Records Directorate

The ODISC4 reorganization took effect on 16 December 1996. As a result, the publications management and printing management function and the records management function are now located in a new office, the Deputy Director for Records. The new office symbol is SAIS-I&A-R. Points of contact and phone numbers are:

Deputy Director for Records	
Ms. Linda S. Dean	703-695-2522 DSN 225-2522
Publications Management and Printing Management	
Ms. Barbara Hemming	703-695-1513 DSN 225-1513
Ms. Barbara Ellis	703-614-3729 DSN 224-3729
Mr. Anthony Tatum	703-697-1517 DSN 227-1517
Records Management	
Mr. Edward Arnold	703-614-0559 DSN 225-0559
Mr. Patrick Smith	703-695-5216 DSN 225-5216
Ms. Sandra Stroud	703-614-0454 DSN 224-0454
FOIA/Privacy Act	
Ms. Rose Marie Christensen	703-607-3377 DSN 327-3377

(Ms. Barbara Hemming, SAIS-I&A-R, DSN 225-1513 or 703-695-1513)

Revision of AR 25-30

As a result of comments received while staffing the revision of AR 25-30, the Army Integrated Publications and Printing Program, and several ongoing initiatives that affect the Army's publishing and printing programs, we are reworking the draft of AR 25-30. Therefore, the original timeline for publication and distribution of the revised AR 25-30 during the 2Qtr FY 97 is being extended until the end of 4Qtr FY 97. At that time, the policy and procedures from AR 25-30 will be published separately. (Ms. Barbara Hemming, SAIS-I&A-R, DSN 225-1513 or 703-695-1513)

Electronic Commerce

The Deputy Under Secretary of Defense (Acquisition Reform) signed the DoD Electronic Commerce (EC) Requirements, Systems, and Implementation Strategy—Version 1.4 in November 1996. This document establishes a common DoD EC vision by defining requirements, roles and responsibilities, and strategies for EC implementation and operation. In addition, it documents the current and future capabilities of the Defense Information Systems Agency (DISA) to support the increasing EC workload through the Defense Information Infrastructure (DII). This document is an evolving document. It is available on the World Wide Web at **http://www.disa.mil/D7/onlnpubs/strategy/**.

The next planned update is April 1997. Comments and requirements for inclusion in it can be E-mailed to this office at **armyec@hqda.army.mil**. (Ms. Debbie Poff, ODISC4, DSN 227-6158 or 703-697-6158)

Decentralized Publishing and Printing Functions

In September 1996, AMC (Army Materiel Command) requested DISC4 support for decentralizing publishing functions to assist AMC in expediting Electronic Technical Manual (ETM) production. Under the ETM project, legacy equipment and technical publications are digitally converted for use on CD-ROMs. In response, DISC4 staff held a working meeting on 10-11 December 1996 with representatives from AMC, USAPPC (U.S. Army Publication and Printing Command), and OAASA (Administrative Assistant to the Secretary of the Army) to review AMC's proposed processes for decentralized authentication and CD-ROM procurement. Process changes defined during the meeting were staffed on 31 December 1996 with comments due by 21 January 1997. Resolution of proposed changes is anticipated by 13 February 1997. After resolution, we will issue policy memorandums to reflect approved changes. (Ms. Barbara Ellis, ODISC4, DSN 224-3729 or 703-614-3729) ❁

Simplify, Integrate, Automate

Reengineering Processes

By Beverly Merrill, SAIS-IMC, DSN 224-3744 or 703-614-3744

Business processes (the way work is performed) must be analyzed and reengineered or restructured, as appropriate, to meet the intent of the ITMRA prior to any system selection or modernization taking place.

The Information Technology Management Reform (ITMRA) Act of 1996 requires the Army to:

*" * * * analyze * * * [its] missions * * * and, based on the analysis, revise * * * its mission-related processes and administrative processes as appropriate before making significant investments in information technology that is to be used in support of the performance of those missions." Sec 5123(5)*

*" * * * promote the effective and efficient design and operation of all major information resources management processes * * * including improvements to work processes of the executive agency." Sec 5125(b)(3)*

Business processes are the end-to-end work activities required to provide products and services to customers. An organization can become highly effective if it can optimize the efforts of its workforce in line with its missions and strategic priorities and eliminate nonvalue added activity. Achieving this optimization may require major changes in procedures, management philosophy, policies, organization structure, and the use of technology. Today, we can no longer afford the push-pull conflicts between cost, quality, product innovations, and employee involvement. Reengineering assumes we need to have it all which is made possible through a total "rethinking" of the organization and its business processes. "Rethinking" is what business process reengineering (BPR) is all about.

BPR is a management discipline applied by functional managers to redesign DoD's processes, organizations, and culture. BPR calls for a critical examination of, and changes in, current business processes (not functions). Business processes cross the boundaries between organizational subunits or functions and sometimes cross organizational boundaries. Examples are: changes in work flow, resource allocation, material life cycle management, combat management (a broad civilian business term for what the military call "task organizing for combat"), infrastructure management, customer services, regulations, job content, job skills, decision-making and empowerment structure, organizational structure, and information systems. The BPR's recommended improvement opportunities are not reliant on automated systems investments. Often, most of the productivity enhancement is from streamlining current operational processes to eliminate nonvalue activities and bottlenecks.

A well-designed process focuses on "value-added" to the organization and its customers. This well-designed process frees employees from burdensome bureaucratic constraints. It enables a focus on value-added activities directly aimed at delivering enhanced products and services to the organization's internal and external customers. A BPR can be accomplished at any level of the organization as long as the processes under review are entirely under the control of the sponsoring leader.

A structured methodology is used for a BPR project. This methodology includes some key outputs, including process modeling and analysis, activity based costing (ABC), benchmarking, and cost and functional economic analysis.

The following six key high-level procedures describe the specific process improvement methodology that should be applied when conducting a BPR.

1. Establish functional project framework. Develop a clear scope for your BPR project with clearly defined parameters. Provide the best qualified persons to participate.

2. Document and analyze the current baseline business processes including the cost of each individual activity in the baseline (Activity Based Costing).

3. Perform business improvement analysis by determining applicable best business practice(s),

Continued on next page

Learn the basics of BPR from the experts!

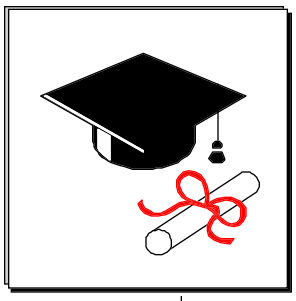
Business Process Reengineering

By Beverly Merrill, SAIS-IMC, DSN 224-3744 or 703-614-3744

BPR Course

The Deputy Assistant Secretary of Defense for Command, Control, and Communications offers the five-day course called Understanding Business Process Reengineering (BPR). It is provided to DoD civilian and military personnel at no charge. GS-11 and above civilians can attend, as well as officers and enlisted E6 and above. Contract personnel currently performing work for DoD under an active contract may also enroll. Other Federal Government employees may attend on a space available basis.

The course consists of two days of Activity and Process (IDEF0) Modeling, one-half day of Activity Based Costing, one-half day of Functional Economic Analysis, and two days of Data and Information (IDEF1X) Modeling. Team members build, present, and discuss their models.



Systems Research and Applications Corporation presents the course at their Arlington, Virginia location. For further information and an application form call 1-800-835-5246 or E-mail **bprinfo@ncr.disa.mil**.

Travel and per diem costs are the responsibility of the attendee. Registration is on a first-come, first-registered basis. Spaces may be available up to the week prior to course dates. The course schedule for the remainder of FY97 follows:

March 10-14 and 24-28
April 7-11 and 21-25
May 5-9 and 19-23
June 2-6, 16-20 and 23-27
July 7-11 and 21-25
August 4-8 and 11-15
September 8-12

World Wide Web Addresses for BPR Information

http://www.dtic.mil/c3i/bprcd—The Electronic College of Process Innovation. A comprehensive collection of information on BPR and process innovation, organized around a college campus metaphor. It features the Library for Business Process Change—a complete reference center of articles, books, tutorials, reviews, case studies; and The Acquisition College—highlighting key acquisition reform information and best practices case studies and the FIPS-compliant desktop business reengineering tool, TurboBPR.

http://www.dtic.mil/dodim/bpr.html — TurboBPR information and download link.

BPR Reading "Classics"

Thomas Davenport, *Process Innovation: Reengineering Work Through Information Technology* (Boston: Harvard Business School Press, 1993).

H. James Harrington, *Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity, and Competitiveness.*

Dr. Sharon L. Caudle, *Reengineering for Results: Keys to Success from Government Experience* (Washington: National Academy of Public Administration, 1994). ❁

Reengineering Processes *continued from previous page*

define alternative business processes, determine cost and risk alternatives, develop data model for alternatives, evaluate alternatives for cost benefit to baseline, select most cost-effective alternative(s), and recommend future business process (To-Be) alternative.

4. Complete a functional economic analysis of the alternatives and develop a management plan for implementation of the selected alternative.

5. Review and approve business improvement plan decisions.

6. Execute the approved business improvement plan decisions and institutionalize the BPR process.

In summary, using a three-word motto—Simplify, Integrate, Automate.

The time used in the BPR process will more than pay for itself with the gains in effectiveness and efficiency. With commitment and discipline, BPR can bring healthy change and needed improvement throughout an organization. ❁

Chief Information Officer Update

By Ronnie Gerstein, Director CIO Integration, DSN 227-4353 or 703-697-4353

The Clinger-Cohen Act

The Information Technology Management Reform Act of 1966, along with the Federal Acquisition Reform Act of 1966 (FARA), was redesignated the Clinger-Cohen Act. The new name serves as a tribute to Representative William Clinger (R-PA) who sponsored FARA and to Senator William Cohen (R-ME), the sponsor of ITMRA. Senator Cohen retired from Congress and was confirmed on 23 Jan 97 as our new Secretary of Defense.

CIO Implementation Plan and Web Site

On 13 January 1997, the Chief Information Officer (CIO) signed the fully coordinated Implementation Plan. The CIO leadership will brief this plan to the Army leadership. Upon Secretary of Army approval, the plan will be made available throughout the Army.

We will soon have a CIO web site on the DISC4 homepage. It will include links with other CIO Internet sites and include information on Business Process Reengineering (BPR).

BPR—an Essential Step

ITMRA mandates that business processes (the way work is performed) must be analyzed and reengineered or restructured as appropriate. BPR provides mechanisms to increase the effectiveness of the use of information resources and to improve the Army's IT/C4I performance for programs, systems, and processes. Recommended alternative solutions developed during a BPR study may preclude the need for a new or upgraded system.

We incorporated this ITMRA requirement into the life cycle management process and PPBES. Users need to ensure that a BPR was completed before submitting an IT/C4I requirement through the TRADOC requirements process. The CIO Integration Directorate validates all requirements documents against the BPR requirement and other criteria.

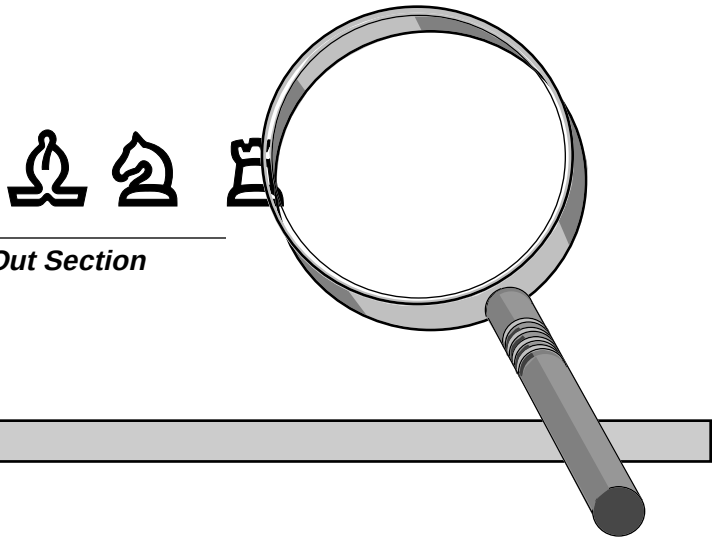
Upon Secretary of the Army approval, the CIO will be the Technical Review and Approval Authority for any BPR with IT/C4I impact. We are undertaking a cooperative effort with other HQDA agencies and MACOM representatives to develop BPR policy, procedures, plans, and standards for the Army. We are also establishing a clearinghouse function to facilitate the BPR process and eliminate redundant BPR initiatives.

New Aviation and Missile Command Announced

The U.S. Army Materiel Command (AMC) announced U.S. Army Aviation and Missile Command as a new command in the AMC family. The new organization results from the merger of its Aviation and Troop Command in St. Louis, Missouri, and its Missile Command in Huntsville, Alabama.

In making the announcement at his Alexandria, Virginia headquarters, AMC Commander General Johnnie E. Wilson said the new name (acronym AMCOM) will be reflected in all future actions involving the merger. The new command raised its provisional flag on 1 October 1996 and will be fully operational on 1 October 1997 as one of ten major subordinate commands of AMC.

The 1995 Base Closure and Realignment Commission recommended the disestablishment of the St. Louis command and said it should be moved to Huntsville and merged with AMC's command there. About 2,000 jobs will transfer from St. Louis to Huntsville by the fully operational date of the new command.



Special Pull-Out Section

INFORMATION FOR THE WARFIGHTER

Trends in Government Information Management

By Miriam F. Browning, Director for Information Management, ODISC4

Background

The federal government spends approximately $27 billion annually on information technology (IT) equipment, software, systems, services, people, facilities, and contracts. Of major concern to federal officials is the fact that the government spends a lot of money on IT but does not demonstrate clearly how information technology has been used to improve missions or reduce costs.

Realizing that federal agencies should improve their management of information technology by focusing, not on the technology, but on results and performance, Congress passed the Information Technology Management Reform Act (ITMRA) of 1996. The key legislator championing ITMRA was then Senator William Cohen (R. Maine). He conducted, along with then Representative William Clinger (R. Pennsylvania), numerous hearings and meetings with both public and private sector IT executives to develop IT reform legislation. ITMRA, also known as the Clinger-Cohen Act, was passed as part of the 1996 Defense Authorization Bill in January 1996. ITMRA is the first fundamental IT statutory change in 30 years. Its key themes are:

- Demonstrating the mission value of information technology, i.e., improving a warfighting/business mission or reducing costs.
- Emphasis on the enabling IT management tools to improve mission value. These include: strategic planning, systems requirements validation, investment and portfolio management of IT, architecture and standards, business process reengineering, performance measurement and results-based management, outsourcing and franchising, acquisition streamlining, program management, and information management skills assessment and improvement.
- Elimination of the Brooks Bill (1964) requiring General Services Administration (GSA) central oversight of the government IT function, especially in the acquisition area. OMB (Office of Management and Budget), not GSA, now has the central oversight for IT in government along with a decentralized approach to IT management.
- Appointment of agency CIOs (Chief Information Officers). CIO positions in 28 federal agencies were formally established by law, with increased visibility (must report to the agency chief) and the authority to modify or terminate IT programs.
- Acquisition of information systems in a modular fashion and the use of more commercial off-the-shelf technology.
- Moving the jurisdiction of acquisition protests from GSA to the General Accounting Office (GAO).
- Establishment of three interagency groups:

1. **The CIO Council**. Composed of federal CIOs, its mission is to develop federal IT policy, share best practices, and set professional development standards for information management.

2. **The Government Information Technology Services Board**. This group is the champion for many of Vice President Gore's National Performance

Continued on next page

Review (NPR) electronic government initiatives such as electronic benefits and funds transfer and the wireless public safety network. The recently published NPR report, "Access America, Reengineering Through Information Technology" demonstrates the progress of these and other electronic government initiatives. You can access it on the World Wide Web at **www.gits.fed.gov**.

3. **The Information Technology Resources Board**. Composed of agency IT and acquisition experts, the board provides independent assessments to agencies and OMB on how to best acquire and develop IT systems.

- Lastly, as a sense of Congress, the Act sets a target of a five percent annual decrease in IT costs and a five percent annual increase in the efficiency of agency operations due to IT.

In light of the imperatives of ITMRA and the increasing changes brought about by the technology, the following trends in government information technology are presented in two tones: the facts concerning their existence and some of the reality behind the facts.

The Ten Trends—Facts and Reality

1. Rise of the Internet

Facts

There are thousands of government World Wide Web sites and government kiosks in malls, libraries, schools, and public spaces providing electronic access to government and community services and information.

Internet increases the use of new computer and communications architectures and networks; thus, a new set of hardware and software platforms is added to the organization's traditional mainframe-based applications processing.

Information becomes instantly accessible to business partners and citizens. Some examples include: electronic commerce in procurement and supply; museums, census data, and libraries online; Social Security Administration's online capability for citizens to request a statement of earnings and estimated future benefits; Washington DC government's online access for citizens to register their cars, obtain copies of birth certificates, and report pot holes.

Universal e-mail is increasing within organizations (Intranet), within communities (civic networks), and to create intellectual production engines (virtual networks) to disseminate information and perform tasks and projects.

Reality

There is congestion on the Web due to too much traffic moving at an inefficient pace. Premium services (i.e., you pay more money for quicker and easier access) and new technologies (such as Asynchronous Transfer Mode which dynamically allocates bandwidth) will eventually alleviate the Internet's slowness.

Many Web sites tend to have more glitz than substance. Go past the first few pages and you find more construction sites than data.

Dual platforms can increase costs and people resources if the organization does not balance its new technologies with the utility of its old legacy systems and platforms.

Internet security is *not*. Private sector and government are working to improve security conditions for organizations and individuals in all areas, e.g., banking, commerce, entertainment, medicine, and defense.

Questions concerning consumer costs and taxes, fair and free citizen access, etc. are beginning to be recognized and debated.

There is a tug and pull between the information libertarians who want no controls on the Internet and the legal and business people who want to tame the Internet to make it a more just and market-driven institution. Note: At least a dozen states have laws regulating the Internet on the use of trademarks and logos without permission, pornography, and anonymous communications.

2. Continued Growth of Business Process Reengineering (BPR)

Facts

BPR is defined as the process of fundamentally changing the way work is performed in order to achieve substantial performance improvements in speed, cost, and quality. IT is an enabler of BPR projects, not the end goal.

Streamlined processes can improve government products and services resulting in better quality and lower costs.

Customers can choose from a wealth of technical tools and consulting services.

ITMRA requires BPR to be accomplished before a computer system is acquired for a mission process.

Real government BPR successes do exist, e.g., the Army Corps of Engineers, the Arizona Department of Public Safety, and the Los Angeles Telecommuting Program.

Reality

Good BPR ideas go nowhere if there is no top executive and organizational commitment.

BPR frequently implies job losses or restructuring which is painful to the workforce who will oppose or slow roll BPR efforts.

Critical success factors for BPR projects include: top level management support, long term commitment, high quality staffing, business as the driver of change, substantial customer input, coordination between organizations, appropriate use of technology, good up front planning, and the ability to change agency culture.

3. Measuring Performance

Facts

Elected officials and senior government executives are increasingly interested in the results that information technology brings to government programs.

Recent laws require the use of performance measures for government programs (Chief Financial Officers Act, Government Performance and Results Act) and the use of performance measures for IT as an enabler to improve the performance of government programs (ITMRA).

Performance measurement is a stakeholder process consisting of five steps:

1. Agree on basic principles for mission, goals, and objectives
2. Brainstorm many ideas for measures
3. Select the best measures
4. Develop a plan and monitor progress
5. Evaluate and calibrate the measures

Key measures used by private sector firms to account for the value and impact of information technology include process and/or product improvement, cycle time reduction, customer satisfaction, and return on investment.

Reality and Lessons Learned

Performance measurement is still in the pioneering stage at all levels of government. A best example is the Oregon Benchmarks program in which the governor, legislature, and citizens established outcome measures for key government areas such as health, education, environment, and public safety. Those measures were linked to legislative priorities and funding.

Lessons learned in performance measurement are:

1. Involve key stakeholders
2. Focus first on the most costly or troubled programs
3. Develop measures in the content of goal setting and management controls, e.g., plans and budgets
4. Choose measures that are outcome oriented, quantifiable, and can demonstrate value
5. Select a "vital few"
6. Do not over promise
7. Focus on communication (the results you are trying to achieve), not measurement
8. Educate and train stakeholders in performance measurement

There is a *de facto* set of performance measures for federal government IT. Named "Raines Rules" after the Director of OMB, Franklin Raines, these measures were part of an October 25, 1996 memo from OMB requiring agencies to measure their information technology investments according to a set of eight criteria. Specifically, investments in major information systems proposed for funding in the President's budget should:

1. Support core/mission functions
2. Be undertaken by the agency because no alternative private sector or other governmental source can sufficiently support the function
3. Support work processes that have been simplified or otherwise redesigned to reduce costs
4. Demonstrate a return on the investment that is clearly equal to or better than alternative uses of available public resources
5. Be consistent with federal and agency information architectures
6. Reduce risk by avoiding custom-designed components, using pilot projects and simulations, testing, establishing accountability measures, and securing agency buy-in and investment
7. Be implemented in phased, successive chunks
8. Exploit an acquisition strategy that appropriately allocates risk between government and contractor and maximizes the use of commercial technology

Continued on next page

4. Protecting Information Security and Citizen Privacy

Facts

The nation's information infrastructure is vulnerable to hackers, terrorists, and criminals. This infrastructure includes public and private technical components (hardware, software, communications), core government systems (e.g., Defense, IRS, Social Security, Medicare, etc.), core commercial systems (phone networks, financial systems, insurance companies, power grids and facilities, oil and gas distribution networks, the air traffic control system, ground and water transportation systems, and emergency and public safety services) and the people who develop and use the infrastructure.

The President established a task force, the President's Commission on Critical Infrastructure Protection, to look at the nation's information infrastructure to determine its extent and components, vulnerabilities, and protective measures. Initial recommendations from the commission are due in July 1997.

Commerce Department is developing government policy toward companies' practice of collecting and using computerized information about consumers and citizens.

Intellectual property rights is a hot legal activity due to increasing Internet usage and applications such as electronic commerce and entertainment, software copyrights, and citizen data privacy considerations.

Reality

Security tends to be a function of two factors: (1) using basic protective measures such as firewalls, passwords, and trained systems administrators and (2) how much money is spent. But, even the most impenetrable systems can be blown. Priorities must be set and user fees, not to mention new taxes, will probably be part of the solution set.

Any new government regulations on citizen privacy will be debated between those who believe them to be a threat and those who believe them to be a blessing.

Solutions to protecting the infrastructure, citizen information privacy, and intellectual property rights will involve debate and increased costs by means of user fees, taxes, and legal fees.

5. Increased Outsourcing and Franchising

Facts

Outsourcing of information technology utility services such as data centers, software development centers, office automation administration, telecommunications centers, and Internet and World Wide Web site facilities/ services will be encouraged.

Franchising by government agencies of selected information technology services may occur if government incentives and costs make this an attractive option. Currently, agencies can make up to three percent profit on services that they sell to other government agencies. Examples of franchising at the Department of Veterans Affairs include data processing, payroll, law enforcement training of security guards, and IT training for disabled individuals.

Reality

Outsourcing may not necessarily be better or cheaper than performing the function or service inside of the government.

Government agencies that choose to outsource a function or service face three potential obstacles: employee resistance, Congressional opposition, and internal agency fiefdoms which will lose power and positions by having a portion (or all) of their worlds outsourced.

The political mood of the country, "the era of big government is over," will (hopefully) prompt a

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serious debate over which government functions are "core" and which can be better performed by the private sector.

There is strong Congressional and private sector opposition to franchising under the rationale that services can be obtained less expensively from the private sector.

Successful outsourcing occurs when there is a win-win situation in terms of dollars and politics. Dollars can accrue to both the government and the private sector through the use of requirements based contracts and incentives. Politics can be beneficial when jobs are preserved through successful negotiations among government representatives, unions, Congressional leaders, and the private sector outsourcing organization.

g was on an ental Personnel gnment from 94 to October irector of the ormation Man- he National ublic Adminis- cademy is a lly-chartered, nk tank. Its mis- prove the per- government at , and local lev- or, Mrs. Brown- d research, nalyses in the ation manage- Academy and Congress. This upon her experi- he Academy my.

6. Arrival of the Chief Information Officers (CIOs)

Facts

ITMRA mandates the establishment of federal CIOs and delineates their duties, qualifications, and reporting requirements to OMB. The purpose in creating federal CIOs is to have them have as an equal and influential partner at the agency's management table.

Key CIO management responsibilities include strategic planning, budget-linked capital planning, financial management and investment, evaluating program and IT performance, business process reengineering, building organizational and contractor partnerships, project management, and economic analysis.

Key CIO technical responsibilities include defining and monitoring technical architectures and standards, systems acquisition, and software management.

The basic CIO skill set includes vision and leadership, professional credibility, communications skills, business acumen, IT human resource development responsibilities, and technology management.

Reality

Having a CIO does not guarantee that the tough IT problems get solved quicker or better.

Attracting and retaining top quality government CIOs will be difficult because of salary, public scrutiny, and ethics prohibitions.

Long term IT leadership may rest more with the career public officials since political appointees typically have an 18-month turnover rate.

7. Software Continues to be the Critical Success Factor in Information Technology Systems

Facts

Software is the most dynamic industry in the US economy and typically the largest cost item in computer systems.

Key software issues are cost and performance. The Software Engineering Institute's (SEI) Capability Maturity Model (CMM) is a process for improving the software development cycle, i.e., decreasing software bugs and costs. The five-stage CMM process with definable outcomes and benchmarks, metrics, and certification is used by private sector and government organizations which have large scale IT systems under development. Note: SEI is a federally funded research and development center aligned with the Defense Department's Advanced Research and Projects Agency and associated with Carnegie Mellon University.

A growing trend is the privatization of government data bases for niche markets, e.g., the Securities and Exchange Commission sells its data bases of financial statistics to private sector firms which then take that data and process them into specific information for a variety of customers.

Hot software "utility" applications today are World Wide Web sites, groupware, and data warehousing (a process for retrieving, integrating, mining, and visualizing data from existing data bases and systems).

Continued on next page

Reality

You can't see or touch software thereby making it a difficult systems and management issue to address.

Software can be harnessed by applying metrics throughout the course of the systems development process. Key metrics include user requirements traceability, errors per lines of code, and estimated versus actual software development costs and schedules.

Offshore use of programmers is causing anxieties in the US labor markets. Computer programmers and other individuals who code or use computers exclusively to complete a task or process are at risk for job loss. A recent example is the use of medical transcribers in Bangalore, India-via the Internet. The transcription is completed in one-half the time and at one-tenth the cost it would take to get the same job done in the US. Further, US companies are already exploring the use of offshore programmers to deal with the Year 2000 problem as there are not enough American programmers to accomplish this enormous job.

8. Continuing Reform

Facts

Two new laws, the Federal Acquisition Streamlining Act (FASA, 1994) and the Federal Acquisition Reform Act (FARA, 1996), seek to streamline the cumbersome federal acquisition process.

Key provisions affecting how the federal government acquires information technology include shorter systems life cycles, streamlined protest procedures, pilot tests of innovative acquisition procedures, use of commercial off-the-shelf software and equipment, modular procurements, more attention to the past performance of contractors, and measuring the performance of procurements.

New contracting techniques are being tested. These include requalification of vendors and contract awards to groups of contractors to provide services to the government on a task order basis. An example is the National Institutes of Health Chief Information Officer Solutions and Partners (CIOSP) program which gives 250 companies a shot at task orders that together are worth an estimated $100 million.

The Federal Acquisition Network (FACNET) was established by FASA to permit the government to use electronic commerce to provide information to private sector contractors and suppliers on federal acquisitions.

Reality

Acquisition of IT products and services is not yet comparable to the private sector in terms of time and costs. It still typically takes more time and costs for the government to acquire IT products and services than it does for the private sector.

Interest groups pressuring Congress will always assure that federal acquisition rules consider them. Key interest groups are the computer and telecommunications industry, small businesses, and lawyers.

Contractors that develop proprietary solutions make more money on a contract than if they develop commercial solutions. Government agencies like home-grown rather than commercial solutions because they are the traditional way of doing business, and they also preserve government jobs. Thus, this behavior is hard to break on the part of both the private sector and the government.

Electronic commerce is an ideal way to transfer information and streamline processes in federal acquisition, but currently the costs of doing business this way favor large government agencies and contractors.

DoD Defense Acquisition Deskbook. This is an online compendium of federal and DoD acquisition regulations, lessons learned, and wisdom from the front lines of procurement. It captures lessons learned and promises to be a good source of institutional knowledge.

9. Bringing IT as an Equal Partner to the Management Table

Facts

Aligning IT and corporate goals has been the top information management issue since 1992.

Federal CIOs will be asking three key management questions: (1) Do we need to perform this process or function? If no, eliminate. If yes and IT is required, (2) Make sure that the process to be automated has been through a BPR or similar process review, and (3) What is the best way to automate the new process—in-house manpower, use of another government agency, or use of a private sector contractor.

Key management tools used to create this equal partnership are:

1. **Capital planning**. IT investment decisions

are integrated with budget and financial decisions. Before making IT investments, agencies must look at reengineering solutions to the problem to be automated, perform cost/benefit analyses, report on the return on the investment, and develop performance measures.

2. **Portfolio analysis**. IT systems and services are reviewed to determine which ones are good and bad investment decisions. Priorities are set based on the organization's mission, goals, and budget. A Darwinian approach is taken, in light of the fact that dollars are limited, to fund the systems of value and to scale back or eliminate the weaker systems.

3. **Performance-based management**. OMB will manage the government's IT portfolio, balancing the risks and returns of each investment. As part of each year's federal budget, OMB will report to Congress on the net program performance benefits resulting from major IT capital investments. Performance measurement and business process reengineering are key components of performance-based management.

Reality

The ITMRA new ways of doing business are just beginning to penetrate the federal govern–ment's planning and budgeting systems. In the Army, a CIO Implementation Plan was approved which integrates IT requirements validation into the Army's warfighting requirements process and integrates IT strategic planning and investment strategies into the PPBES.

GAO, OMB, and GSA are publishing guidelines to assist agencies in learning how to apply performance management to IT investment decisions. These guidelines include:

1. 1994 GAO guide, **Improving Mission Performance Through Strategic Information Management and Technology**, describes 11 management practices that top government and private sector organizations have used to leverage information technology to improve program performance.

2. OMB Circular A-11, **Preparation and Submission of Budget Estimates**, to be published in 1997, will be an interim guideline to encourage capital planning. An OMB document scheduled for publication in 1999 will more thoroughly tell federal managers how to plan and manage capital assets and will be a single point of reference for the new performance based laws.

3. Both GSA and DoD are working on guidelines related to IT performance measurement.

10. Increased IT Business Opportunities at State, Local, and International Levels

Facts

Whereas federal IT budgets are remaining relatively constant over the next five years, IT budgets for states and local governments are increasing. Over 46 states now have CIOs.

Some countries' governments, notably Canada and Australia, are ahead of the US government in developing citizen service standards and accounting for information technology as an enabler of government programs.

Intergovernmental collaboration is just beginning to be recognized, e.g., how can federal, state, and local governments cooperate in solving the Year 2000 problem, what is an economical way for governments to consolidate similar IT support services such as data processing centers, software development, etc.

Civic networks are a growing trend. Successful community civic networks (Blacksburg, Virginia; Santa Monica, California; Seattle, Washington: LatinoNet, San Francisco) are enhancing services to the citizen and citizen participation in government.

Realty

Incentives for federal, state, and local government IT collaborations are not developed enough to provide breakthroughs in terms of lower costs or the smooth delivery of services. Most recently, in February 1997, the White House and the National Governors Association formed a joint effort, the US Innovation Partnership, to identify ways federal and state governments can work together. The partnership will identify ways for federal and state governments to lift burdensome regulations, boost technology development, stimulate venture capital, and remove legal barriers.

It is easier to mandate information management policies and technical standards for the federal government as a single unit than for fifty plus independent states. National and international standards bodies will play a major role in accelerating more open architectures for the seamless dissemination of information across government boundaries.

Continued on next page

Challenges

These ten trends will continue to flourish and have already awakened a quiet revolution in the way the government thinks about and performs its missions. In order for electronic government to be of value to people as both citizens and taxpayers, there are a number of challenges which we must successfully address. These include:

- Fostering the cultural changes needed to assure that the mission value of IT is recognized as a top priority and operating principle of government agencies.
- Developing and maintaining long term IT leadership and skills competencies for the government.
- Successfully demonstrating that IT can improve government services and reduce costs.
- Measuring IT performance against the organization's mission.
- Educating stakeholders.
- Fostering productive government-private sector partnerships. ❁

Keeping Informed

Keeping informed on the issues and changes in information management is a responsibility of all government managers. Listed below are a number of resources which provide credible, readable information in this field.

Books

1. ***Techo Vision*** by Charles Wang
2. ***The Digital Economy*** by Don Tapscott
3. ***Being Digital*** by Nicholas Negroponte
4. ***Reinventing Leadership*** by Warren Bennis and Robert Townsend
5. ***Leading Change*** by James O'Toole
6. ***The Seamless Government*** by Russell M. Linden

Newspapers/Magazines

1. Wall Street Journal
2. Business Week
3. Fortune
4. CIO Magazine
5. Wired
6. Harvard Business Review
7. Sloan Management Review (MIT Press)
8. Fast Company
9. Trade publications such as Federal Computer Week, Government Computer News, and Washington Technology.

Studies

1. **Information Management Performance Measures**, National Academy of Public Administration, January 1996
2. **Reengineering for Results, Keys to Success from Government Experience**, National Academy of Public Administration, August 1994
3. **Universal Access to E-mail, Feasibility and Societal Implications**, RAND, 1995

Get Ready to Attend STC '97

by MAJ Mel Crutcher, ODISC4-IIAC, DSN 235-6090
or 703-275-6090 or E-mail to crutchem@hqda.army.mil

LTG Guenther extends an invitation to you to attend the Ninth Annual Software Technology Conference (STC '97) in the Salt Palace Convention Center, Salt Lake City, Utah, from 27 April to 2 May 1997. This conference is co-sponsored by the Departments of the Army, Air Force, Navy, Marine Corps, and the Defense Information Systems Agency and is the premier software technology conference in the Department of Defense. This year's theme is "Information Dominance Through Software Technology." Some of the key speakers include:

Gen Howell M. Estes III, Commander in Chief, US Space Command

Lt Gen Albert J. Edmonds, Director, Defense Information Systems Agency

Lt Gen William J Donahue, USAF, Chief of Staff, Communications and Information

Dr., Marvin Langston, USN, Deputy Assistant Secretary of the Navy for C4I/EW/Space

Maj Gen David A. Richwine, USMC, Assistant Chief of Staff C4I

Mr. Norman R Augustine, Chairman and CEO Lockheed Martin Corporation

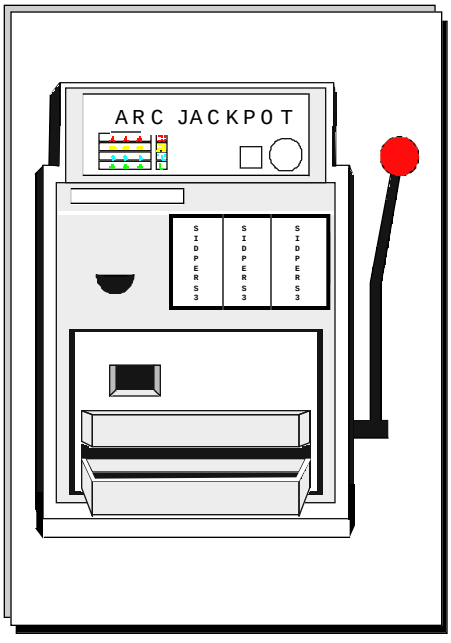
There will be tutorials, tracks, and a general session open to all conference attendees. Additionally, there will be a Joint-Service Executive Luncheon for all General and Flag Officers, Senior Executive Service personnel, and CEOs on Tuesday, 29 April 1997. LTG Otto J. Guenther, Army CIO, will present the introductory remarks to the Closing General Session on Thursday.

You may call the author if you have any questions. Also, Ms. Dana Dovenbarger at DSN 777-7411 or commercial 801-777-7411, is responsible for Conference Management. She can also answer any questions you might have.

I hope you will be able to join us.

See the new AR 25-1 at http://www.army.mil/disc4/ar25-1/default.htm

SIDPERS-3 *Continued from front page*



(XDB™) to Informix™.[2] The 1250 lines of Ada code represented the handling and ordering of table names for the "from" clause of the SQL query. Additionally, one of the Oracle™ query generation methods used was the one that determines which table is used first and how the joins are added to the "where" clause. (XDB™ requires redundant table joins to make the query run in an acceptable time, whereas Informix™ and Oracle™ do not).

Through the conservative cost modeling used by the ARC, it is estimated that SIDPERS-3 realized a cost benefit range [between] $49,000 (low side) [and] $73,000 (high side) by reusing this code. Once full testing of this component is complete (expected in April 1997), it will be submitted for evaluation as a candidate for the ARC Library.

[1] See ARC Newsletter, Vol 2, Number 4, December 1993

[2] The total lines of code for the Informix™ version of AHQ is 26,575 for Ada and 972 for Informix Modular SQL™. (These totals were determined by using the wc-I Unix Command.)

Editor note: This article first appeared in the ARC [Army Reuse Center] News, Volume 5, Number 4, December 1996. For more information, contact ARMY REUSE CENTER, STOP C2, SUITE S122A, 6000 6TH STREET, FT BELVOIR, VA 22060-5576 or E-mail to ARCNEWS@issc.belvoir.army.mil.

Army Signal Command Opens Army Configuration Management Office

By SSG James Ward, ASC PAO

The Army Signal Command (ASC) will take another step toward a more centrally managed global network when it assumes executive agency of configuration management for information technology systems and software.

This new effort will be run under the auspices of the Army Configuration Advisory Group (ACAG). The ACAG will provide configuration management and oversight for all Army switch systems, both tactical and fixed station, as well as configuration management for security programs under the C2 Protect initiative.

"You cannot have network-wide information assurance if you don't have centralized management," MG Charles G. Sutten, the ASC commander, said. The Chief Information Officer for the Army, the DISC4, will take charge of this centralized effort but will come to folks at the ASC for help in making this program a success.

According to Chief Warrant Officer 4 David McKee, among the most tangible examples of this process is the creation of the Army Configuration Management Office (ACMO).

"As part of its executive agency role, the Army Signal Command will establish the ACMO at Fort Huachuca. The ACMO will accomplish the day-to-day functions of configuration management," McKee, who was named to head up the newly created office, said.

McKee says that the mission of the ACMO will be to establish configuration management and oversight for all Army switch systems, both tactical and fixed station. "MG Sutten clearly understands that setting up an office that will act as the central point for configuration management is long overdue and has determined that ASC is the best place to work this issue," McKee said.

Among the tasks awaiting the office, which is scheduled to open for business in late February, is the creation of several Web pages that will give program managers and commanders a real chance to get the latest information on configuration issues.

In practical terms, this centrally managed approach will go a long way toward reducing turbulence, especially at the unit level.

> ***"You cannot have network-wide information assurance if you don't have centralized management."***
>
> ***... MG Charles G. Sutten***

"There are joint configuration control boards, but no single place that an Army commander can go to request configuration status for a particular unit or garrison. Since the ASC operates and installs many of the systems being used by these units, we decided to take on this project," McKee said.

McKee points out an example when such units as the 7th Signal brigade gets alerted and the 63rd Signal Battalion is task organized to work with them. Under these circumstances, the brigade task force commander can access the ACMO's Internet site to find out all the necessary information concerning configuration management of the 63rd, to include software baseline and equipment status. This equipment includes routers, switches, both tactical and strategic, and all sustaining base information systems. It also includes the software being used on this backbone.

"Currently, there is no way to do this task, short of using the telephone and a stubby pencil. What we're hoping to do is save the Army a lot of money and also ensure that our power projection Army is configured in such a way that soldiers and leaders are fully able to operate on the information battlefield of the 21st Century," McKee said.

Persons having questions about this new office can contact McKee by electronic mail at **mckeed@ huachuca-emh12.army.mil**.

Need a computer?

Charge It and Save $$

By MSG Jeff Murray, DSN 987-6589 or 908-427-6589
or E-mail murrayj@isma8.monmouth.army.mil

If you have been thinking of buying computers for your office, now is the time to do it and save money. Why? The Army's Product Manager for the Small Computer Program (PM SCP) recently awarded two new contracts—Personal Computer 2 (PC-2) and Portable Computer 2 (Portable-2).

"What some people don't know is that most of our contracts are available to all federal agencies and represent significant saving to our customers," said LTC Mary Fuller, PM SCP. She added that most SCP contractors now accept credit cards for purchases.

PM SCP is the Army's primary source of information technology products and services including small and medium sized computer hardware, software, networking and infrastructure support services for the Power Projection base and strategic and theater and tactical users. According to Fuller, SCP manages more than a dozen indefinite delivery/indefinite quantity (ID/IQ) contracts that cover the gamut of information technology. These SCP contracts include:

Army Personal Computer 2 (PC-2): A dual award (Sysorex and BTG) to generate maximum competition. This contract offers Pentium-based PC's, software, printers, CD-ROM, modems, color monitors, and support.

Army Portable Computer 2 (Portable-2): Also a dual award (Sysorex and GTSI) contract. Portable-2 offers Pentium-based color notebook computers, software, peripherals, upgrades, and service support. It will be available April 1997.

Small Multi-user Computer II (SMC-II): Awarded to Telos Corporation, this offers Multi-user CPU's (servers), network hardware and software and technical services.

Desktop Videoteleconferencing (DVTC): Two contracts (Delta Corporation and TRW) offer complete DVTC systems or components, as well as warranty and maintenance.

Sustaining Base Information Services (SBIS-ID/IQ): Awarded to Lockheed-Martin, SBIS-ID/IQ offers Pentium PC's, high-end servers, peripherals, software, LAN, and maintenance.

Fuller said that noncredit card purchases over $5000 require a one percent Army service fee, but added that you get a lot for that one percent.

"You get your computer products fast," said Fuller. "Typically, we have it on your desk within 30 days after the vendor receives your order. Plus, you get your computer products hassle free. We do the up-front work of market research—which is an ongoing thing with us—and all contracts are competitively awarded."

The bottom line, Fuller said, is that PM SCP can save you up to 40 percent because of SCP's buying power, multiple award strategy, and use of full and open continuous competition.

If you need more detail, see the SCP homepage at **http://www.monmouth.army.mil/scp**.

All federal agencies can save money buying computers via series of contracts managed by the Army Product Manager for the Small Computer Program (PM SCP)—and most SCP contractors now accept credit cards for purchases.

ATTENTION

AR 25-1, Army Information Resources Management Program regulation is ONLINE at
http://www.army.mil/disc4/ar25-1/default.htm

Changes in the wind—

The ViewPoint

By Pat Lesko, Editor

E-mail Address

We have a new mailbox for those pen pals out there who wish to submit material for publication. It is **viewpoint@hqda.army.mil**.

Keep up the good work and keep sending in those articles—you are the folks with the success stories to share with others.

WWW Reminder

You can see and download *The ViewPoint* at **http://www.army.mil/disc4/newslet/newslet.htm**.

A fairly new feature allows you to view *The ViewPoint* as a .PDF file—it looks just like the paper copy. This feature also allows you to print it recent issues on your laser printer. The copy is exactly like the screen image, including pictures. We tested print successfully on an IBM Lexmark 4019, a HP LaserJet IIISi, and a HP LaserJet 4Si/4SiMX PS.

You will need a free software add-on called Acrobat Reader to view a .PDF file. I provided a hyperlink to get a copy for your particular operating environment for each issue on the Web page for the latest issues.

Good Bye from The Editor

The bad news is that I will miss a lot of you. The good news is that, yes, I am retiring.

After almost 34 years as a civil servant I find it time to move on to another job—gardening, walking the dogs, exercising properly, spoiling the grandchildren, and cooking very good, gourmet meals for my husband. While this may sound rather domestic, I am also setting the groundwork for my own business—just in case I get bored.

I've always wanted the time to build a piece of furniture, to finish a large cross stitch project in less than a year, read a really good book, surf the net, try out a new piece of desktop publishing software, teach . . . . . Or how about just learning something new—skydiving, learning to paint with oils, writing a book . . . . . .

As you can see, I am not at a loss for ideas to fill my time. I will, however, be at a loss without the wonderful relationships (real and electronic) that you allowed me to share with you over the years.

And so I bid a fond farewell to you all.

I will be just a keystroke away at **patlesko@erols.com**.

New and helpful Web sites—

Sysops Corner

DTIC's BPR Help Desk Update

The Web URL is now **http://www.dtic.mil/bpr-helpdesk/**. The change is due to the recent mission and name change for the Help Desk.

The BPR Bibliography is now available on-line in HTML, **see www.dtic.mil/bpr- helpdesk/collect.html**. The bibliography includes citations with abstracts and URLs, if available, for full text documents and software.

Three recent additions to the collection:

1. Defense Information Infrastructure Master Plan Version 4
2. DOD Data Model Version 3-96
3. DoD Information Integration Strategy Migration ("Tree") Diagrams. Version 9

The new URL for the Business Process Reengineering Certification Program (BPRCP), formerly CADRE100, is **www.ria.army.mil/amec/wwwbpr.html**.

DTIC's BPR Help Desk is 1-800-225-3842 x4 or 703-767-9050 or DSN 427-9050. Their E-mail address is **bprinfo@dtic.mil**.

USAJOBS

A listing of vacancy announcements—
http://www.usajobs.opm.gov
A Federal Employee's Survival Guide—
http://safetynet.doleta.gov/

Joint Federal Travel Regulations

The Joint Federal Travel Regulations (JFTR)—**http://www.dtic.mil/perdiem**

These regulations are updated monthly. The internet serves as a quick and easy tool for researching and referencing travel and transportation entitlements.

For answers to any questions, please call Ms. Roberts at DSN 224-4138 or 4361.

AR 25-1

AR 25-1, Army Information Resources Management Program regulation is ONLINE at **http://www.army.mil/disc4/ar25-1/default.htm**

IMA BBS Access Info

Internet FTP:
IP Address: ftp.army.mil
or 160.147.68.21
user name=anonymous
password=E-mail address

URL:
ftp://ftp.army.mil or
ftp://160.147.68.21

Early Bird ...

... can be dowloaded by any user with a .MIL E-mail address. For access information, send E-mail to IMABBS@hqda.army.mil. Put "Early Bird Subscription Request" in the subject line. Include your FULL name, DSN phone number, and SMTP E-mail address in the message.

WWW Access

The US Army Homepage

http://www.army.mil